Complete Summary

TITLE

Stroke: percent of ischemic and hemorrhagic stroke patients who have received venous thromboembolism (VTE) prophylaxis or who have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.

SOURCE(S)

Specifications manual for national hospital inpatient quality measures, version 3.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2009 Oct. various p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure* is used to assess the percentage of patients with an ischemic stroke or a hemorrhagic stroke who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.

*This is a Joint Commission only measure.

RATIONALE

Stroke patients are at increased risk of developing venous thromboembolism (VTE). One study noted proximal deep vein thrombosis in more than a third of patients with moderately severe stroke. Reported rates of occurrence vary depending on the type of screening used. Prevention of VTE, through the use of

prophylactic therapies, in at risk patients is a noted recommendation in numerous clinical practice guidelines. For acutely ill stroke patients who are confined to bed, thromboprophylaxis with low-molecular-weight heparin (LMWH), low-dose unfractionated heparin (LDUH), or fondaparinux is recommended if there are no contraindications. Aspirin alone is not recommended as an agent to prevent VTE.

PRIMARY CLINICAL COMPONENT

Stroke; venous thromboembolism (VTE) prophylaxis

DENOMINATOR DESCRIPTION

Ischemic or hemorrhagic stroke patients (see the related "Denominator inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Ischemic or hemorrhagic stroke patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- Anticoagulants and antiplatelet agents in acute ischemic stroke: report of the Joint Stroke Guideline Development Committee of the American Academy of Neurology and the American Stroke Association (a division of the American Heart Association).
- Guidelines for the early management of adults with ischemic stroke. A guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups.
- (1) Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack. (2) Update to the AHA/ASA recommendations for the prevention of stroke in patients with stroke and transient ischemic attack.
- Prevention of venous thromboembolism. American College of Chest Physicians evidence-based clinical practice guidelines (8th edition).

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Adams HP Jr, del Zoppo G, Alberts MJ, Bhatt DL, Brass L, Furlan A, Grubb RL, Higashida RT, Jauch EC, Kidwell C, Lyden PD, Morgenstern LB, Qureshi AI, Rosenwasser RH, Scott PA, Wijdicks EFM, American Heart Association, American Stroke Association Stroke Council, Clinical Cardiology Council. Guidelines for the early management of adults with ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology [trunc]. Stroke2007 May;38(5):1655-711. [738 references] PubMed

Agency for Health Care Policy and Research (AHCPR), Post-Stroke Rehabilitation Guideline Panel. Post-stroke rehabilitation. Clinical practice guideline. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, AHCPR; 1995 May. 248 p.(Clinical practice guideline; no. 16). [334 references]

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Coull BM, Williams LS, Goldstein LB, Meschia JF, Heitzman D, Chaturvedi S, Johnston KC, Starkman S, Morgenstern LB, Wilterdink JL, Levine SR, Saver JL. Anticoagulants and antiplatelet agents in acute ischemic stroke: report of the Joint Stroke Guideline Development Committee of the American Academy of Neurology and the American Stroke Association (a division of the American Heart Association). Stroke2002 Jul;33(7):1934-42. [19 references] PubMed

Desmukh M, Bisignani M, Landau P, Orchard TJ. Deep vein thrombosis in rehabilitating stroke patients. Incidence, risk factors and prophylaxis. Am J Phys Med Rehabil1991 Dec;70(6):313-6. PubMed

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Geerts WH, Bergqvist D, Pineo GF, Heit JA, Samama CM, Lassen MR, Colwell CW. Prevention of venous thromboembolism: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). Chest2008 Jun;133(6 Suppl):381S-453S. [728 references] PubMed

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Antithrombotic and Thrombolytic Therapy. Chest2004 Sep;126(3 Suppl):338S-400S. [794 references] PubMed

Kucher N, Koo S, Quiroz R, Cooper JM, Paterno MD, Soukonnikov B, Goldhaber SZ. Electronic alerts to prevent venous thromboembolism among hospitalized patients. N Engl J Med2005 Mar 10;352(10):969-77. PubMed

Michota FA. Venous thromboembolism prophylaxis in medical patients. Curr Opin Cardiol2004 Nov;19(6):570-4. [36 references] PubMed

Sacco RL, Adams R, Albers G, Alberts MJ, Benavente O, Furie K, Goldstein LB, Gorelick P, Halperin J, Harbaugh R, Johnston SC, Katzan I, Kelly-Hayes M, Kenton EJ, Marks M, Schwamm LH, Tomsick T. Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: a statement for healthcare professionals from the American Heart Association/American Stroke Association Council on Stroke [trunc]. Stroke2006 Feb;37(2):577-617. [466 references] PubMed

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Accreditation
Collaborative inter-organizational quality improvement
Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Among adults age 20 and older, the estimated prevalence of stroke in 2005 was 5,800,000 (about 2,300,000 males and 3,400,000 females). Each year about 780,000 people experience a new or recurrent stroke. About 600,000 of these are first attacks, and 180,000 are recurrent attacks. On average, every 40 seconds someone in the United States has a stroke.

EVIDENCE FOR INCIDENCE/PREVALENCE

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

ASSOCIATION WITH VULNERABLE POPULATIONS

Each year, about 60,000 more women than men have a stroke. Men's stroke incidence rates are greater than women's at younger ages but not at older ages. Blacks have almost twice the risk of first-ever stroke compared with whites.

EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

BURDEN OF ILLNESS

Stroke accounted for about one of every 16 deaths in the United States in 2004. When considered separately from other cardiovascular diseases, stroke ranks No. 3 among all causes of death, behind diseases of the heart and cancer. Among persons ages 45-64, 8 to 12 percent of ischemic strokes and 37 to 38 percent of hemorrhagic strokes result in death within 30 days.

Stroke is a leading cause of serious, long-term disability in the United States. The median survival time following a first stroke is 6.8 years for men and 7.4 years for women age 60-69 years-old. At age 80 and older, it is 1.8 years for men and 3.1 years for women.

EVIDENCE FOR BURDEN OF ILLNESS

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

UTILIZATION

Unspecified

COSTS

The estimated direct and indirect cost of stroke for 2008 is $65.5 billion. The mean lifetime cost of ischemic stroke in the United States is estimated at $140,048. This includes inpatient care, rehabilitation, and follow-up care necessary for lasting deficits.

EVIDENCE FOR COSTS

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Safety

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Stroke inpatients discharged with a specified International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for ischemic or hemorrhagic stroke

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
Stroke patients with an International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for ischemic or hemorrhagic stroke as listed in Appendix A of the specifications manual

Exclusions

- Patients who are discharged on the day of or day after hospital admission
- Patients less than 18 years of age
- Patients who have a Length of Stay less than 2 days
- Patients who have a Length of Stay greater than 120 days
- Patients receiving *Comfort Measures Only* documented on day of or day after hospital admission
- Patients enrolled in a clinical trial
- Patients admitted for *Elective Carotid Intervention*

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Institutionalization

DENOMINATOR TIME WINDOW

Time window brackets index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
Ischemic or hemorrhagic stroke patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given on the day of or day after hospital admission

Exclusions
None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Get With The Guidelines (GWTG, American Heart Association/American Stroke Association) electronic tool may be used for data collection.

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

STK-1: venous thromboembolism (VTE) prophylaxis.

MEASURE COLLECTION

National Hospital Inpatient Quality Measures

MEASURE SET NAME

Stroke

SUBMITTER

Centers for Medicare & Medicaid Services
Joint Commission, The

DEVELOPER

Centers for Medicare & Medicaid Services/The Joint Commission

FUNDING SOURCE(S)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

The composition of the group that developed the measure is available at: http://www.jointcommission.org/CertificationPrograms/PrimaryStrokeCenters/stroke_advisory_panel.htm.

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

ENDORSER

National Quality Forum

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2009 Apr

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Specifications manual for national hospital inpatient quality measures, version 3.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2009 Oct. various p.

MEASURE AVAILABILITY

The individual measure, "STK-1: Venous Thromboembolism (VTE) Prophylaxis," is published in the "Specifications Manual for National Hospital Inpatient Quality Measures." This document is available in Portable Document Format (PDF) from The Joint Commission Web site. Information is also available from the Centers for Medicare & Medicaid Services (CMS) Web site. Check The Joint Commission Web site and CMS Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

NQMC STATUS

The measure developer informed NQMC that this measure was updated on April 30, 2009 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on September 9, 2009.Â The information was verified by the measure developer on November 9, 2009.

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